AUSTIN S. MANN.

METALLIC HEEL.

116973

PATENTED JUL 11 1871.

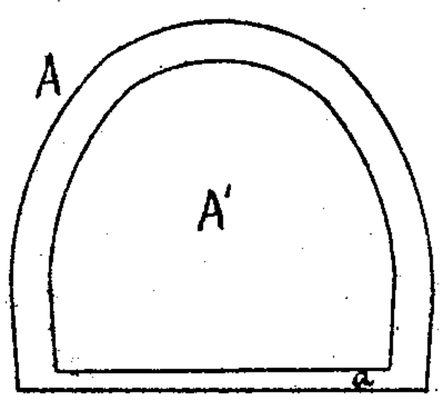

FIG: 1.

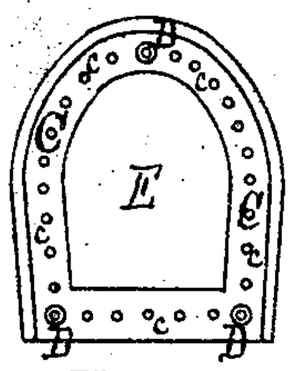

FIG: 2.

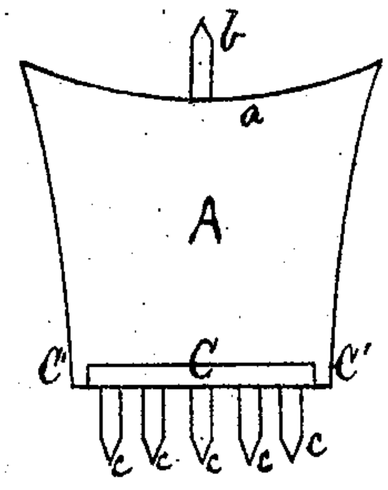

FIG: 3

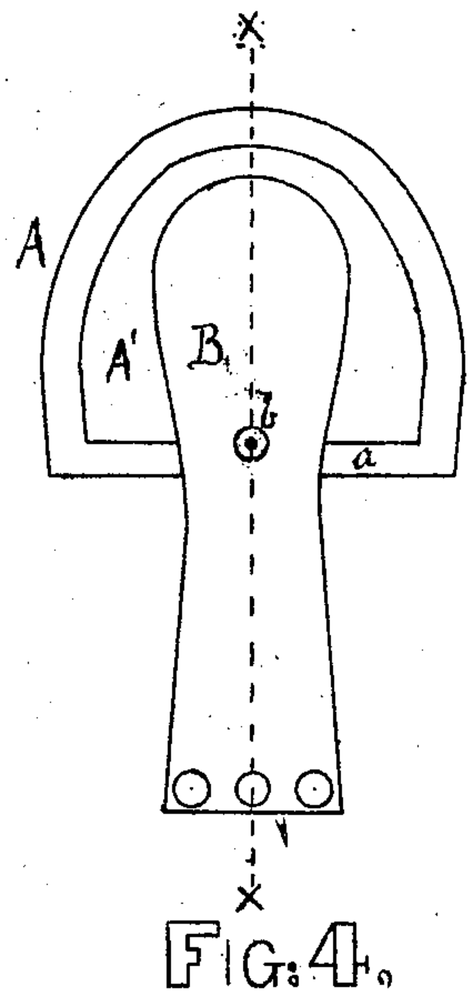

FIG: 4.

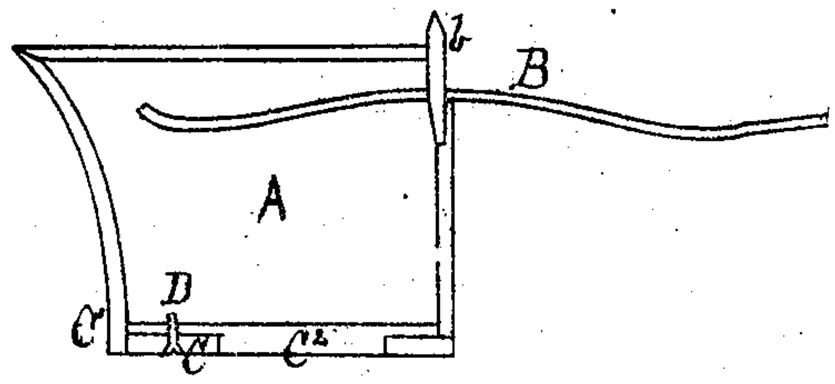

FIG: 5.

WITNESSES.
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116,973

UNITED STATES PATENT OFFICE.

AUSTIN S. MANN, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN METALLIC HEELS.

Specification forming part of Letters Patent No. 116,973, dated July 11, 1871.

To all whom it may concern:

Be it known that I, AUSTIN S. MANN, of St. Louis, in the county of St. Louis and State of Missouri, have invented certain new and useful Improvements in Metallic Heels; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing and to the letters of reference marked thereon making part of this specification, in which—

Figure 1 is a top view of a shell-heel. Fig. 2 is a bottom view of a modification of the plate-pad. Fig. 3 is a front view of the heel with the pad-plate attached. Fig. 4 is a top view of a shell-heel with the metallic shank attached. Fig. 5 is a vertical sectional view on the line *x x*, Fig. 4.

The nature of my invention consists in so combining a spring-shank with the hollow metallic heel that, while the foot is freely allowed to settle in the cavity formed by the shell of the heel, still, at the same time, to so distribute the pressure of the foot along the shank as to cause its entire surface to serve as a bearing-plate for the foot. This combination of the shank and hollow heel not only adds to the durability, and in every particular the excellency of the boot to which it is attached, and this, too, without in any manner destroying its neat appearance, but also remedies the great difficulty heretofore invariably experienced by all who have used or worn the hollow metallic heel—that is, the pressing of the front wall of the heel against the foot as the heel settles in the cavity of the shell. As this front wall is, of course, very narrow, it soon so forces up the leather at the point of its bearing on the sole as to form a ridge which renders the boot or shoe most uncomfortable to wear. The shank is connected with the heel by means of a pivot bearing on the front wall of the shell. My invention also consists in securing the pad by means of tacks or pins being driven through the same and clinched, when said tacks or pins are secured to an independent plate or ring, this plate or ring to be so attached to the lower face of the heel by screws as to allow of its removal at pleasure. The great advantage of this arrangement is that malleable or steel pins or tacks can be used without requiring that they should be so embedded in the heel itself as to constitute a permament part thereof, so that, if desired, new tacks or pins may be used each time a fresh pad is required.

To enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation.

A is the metallic shell-heel, which is made of any suitable metal or composition, and is of the ordinary style and constructed in the usual manner. B is a metallic spring-shank, and is a thin plate of steel or other suitable metal. This shank is so formed as to conform to the contour of the foot, and is slightly recessed at its rear end, which furnishes a dished or scooped seat for the heel to rest in. The shank B has its bearing on the pivot-center *b*, secured in the upper face of the front wall *a* of the shell. This shank, during the process of manufacturing the boot or shoe to which it is to be attached, is embedded between the layers that form the inner and outer soles. The pin *b*, being of steel or other malleable metal, is driven through the sole and turned down and clinched on its inner face. Thus it will be clearly observed how completely and effectually this combination guards and protects the foot from the inconvenient pressure of the wall *a* against the same, as the heel settles in the cavity A′ of the shell A. Instead of the weight caused by the pressure or tread of the foot falling, as heretofore, on a single-line bearing—the upper face of the wall *a*—it falls directly on the shank, and while, owing to its pivoted bearing, the shank in no manner impedes the settling of the foot to a natural and comfortable position, still the pressure is so equalized and distributed along the entire surface of the shank-plate that not the slightest inconvenience is experienced by the wearer. The heel may be attached to the boot by screws or by steel or malleable pins, said pins being formed with the heel, as is the pin *b*, which forms the pivot-bearing for the shank, by inserting them in the core at the desired point before the molten metal, which is to form the shell or wall of the heel, is poured in. C is a ring or plate that forms the bearing for, or to which the pad designed to render the heel noiseless is attached. This plate is made of metal, leather, or any other suitable material. It may be a plate, and fitted in the recess formed by the flange or shoulder C^1 which is usually cast on the lower face of the heel for the reception of the pad, or when the heel is cast without this shoulder, as is sometimes the case, it may be of dimensions sufficent to cover the entire lower face of the heel. I usually form it

as shown in Fig. 2, and of such size as to allow of its insertion and snugly fitting in the recess beteen the flange C^1 and the shoulder of projection C^2. This shoulder or projection is formed by countersinking in casting a recess on the interior face of the lower or base-plate of the heel. This plate or ring C, when made of metal, is cast with a number of holes or openings for the tacks or pins *c c* to be passed through; when the ring is made of leather or other like material the formation of these holes is unnecessary, as the tacks can readily be driven through. This ring or plate is attached to the lower face of the heel by independent screws D, as clearly shown in Fig. 5; or when the shell A itself is to be attached to the sole-heel by screws, these screws may be made to perform the double office of securing the pad to the heel and the heel to the boot or shoe. E is the pad, and is attached to a ring or plate by driving the tacks *c c* through and clinching them. It will be observed that the tacks or nails are not permanently attached to the ring or plate C, but are securely retained by it, their heads being held between the inner face of the ring and the base-plate of the heel. All who are familiar with the trade know that the pad on the metallic heel, to render the same noiseless and to prevent its slipping in winter and wet weather, is an indispensable requisite, as metallic heels without them are not used. The great difficulty with all pads now in use, attached as they invariably are by screws, is, that the head of the screw, owing to its constant contact with the pavement or floor, is soon so worn as to render it almost impossible to detach it from the heel to replace the worn-out or run-down pad by a new one. By my arrangement it will be seen that the pad, when occasion requires, can be replaced with the greatest facility: You have simply to remove the screws D, the heads of which are protected in consequence of their resting against and being covered by the upper face of the pad; then break off the turned-down portion of the tacks or pins *c c* and pull away the pad; then, by driving the old tacks out of the holes and inserting others, the plate is in condition to receive and retain a new pad.

Having thus fully described my invention, what I claim therein as new, and desire to secure by Letters Patent of the United States, is—

1. The combination of the hollow metallic or shell-heel A and shank B, when the latter is attached at a pivot-center, *b*, on the front wall *a* of the heel, so as to operate substantially as described, as and for the purpose specified.

2. The combination of the metallic heel A and the detachable ring or plate C, when the latter is provided with tacks or pins *c c* for securing the pad, and is formed, in the manner described, so as to allow of the removal of said tacks or pins and the substitution of new or additional ones when the pad is required to be renewed, substantially as described, as and for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

AUSTIN S. MANN.

Witnesses:
EDWIN JAMES,
JOS. T. K. PLANT.